LISTING OF CLAIMS:

1. (Currently amended) An apparatus for measuring sizes of articles comprising:

a light projecting device for projecting light toward an article from one side of an article;

a photo-sensor device arranged on the other side of the article and including a plurality of photo-detectors arranged in array in a first direction such that light projected from the ~~said~~ light projecting device and impinging upon the photo-sensor device without being interrupted by the article is received by one or more photo-detectors;

a driving device for reciprocally moving ~~said article and said~~ the light projecting device and photo-sensor device relative to ~~each other~~ the article in a second direction perpendicular to the ~~said~~ first direction;

a shifting device for shifting the ~~said~~ photo-sensor device in the ~~said~~ first direction into at least first and second positions which are mutually separated by a distance smaller than a pitch at which the ~~said~~ photo-detectors are arranged in array;

a control device for controlling the ~~said~~ driving device and shifting device such that when the ~~said article and~~ light projecting device and photo-sensor device are moved by the ~~said~~ driving device in a forward direction, the ~~said~~ photo-sensor device is in the ~~said~~ first position and when the ~~said article and~~ light projecting device and photo-sensor device are moved by the ~~said~~ driving device in a backward direction, the ~~said~~ photo-sensor device is in the ~~said~~ second position; and

a signal processing device for processing output signals generated from the ~~said~~ photo-detectors under a control of a control signal supplied from the ~~said~~ control device to measure size

of the article with a resolution higher than the pitch at which the ~~said~~ photo-detectors are arranged in array.

2. (Original) The apparatus according to claim 1, wherein the photo-detectors in the photo-sensor device are arranged into a single array with the pitch L and the photo-sensor device is shifted in the second direction over a distance of L/2.

3. (Original) The apparatus according to claim 1, wherein the photo-detectors in the photo-sensor device are arranged into n (n is integer equal to or larger than 2) rows with the pitch L and the n rows of photo-detectors are relatively shifted in the second direction by a distance L/n, and the photo-sensor device is shifted in the second direction over a distance of L/2n.

4. (Previously presented) The apparatus according to claim 2, wherein the article is placed on a transparent plate and the light projecting device and the photo-sensor device are arranged on respective sides of the transparent plate.

5. (Currently amended) The apparatus according to claim 4, wherein the ~~said~~ transparent plate is arranged stationary and the ~~said~~ light projecting device and photo-sensor device are arranged movably in the first direction.

6. (Currently amended) The apparatus according to claim 5, wherein the ~~said~~ light projecting device is provided on a lower horizontal portion of a frame and the ~~said~~ photo-sensor device is provided on an upper horizontal portion of the frame, and the ~~said~~ frame is arranged movably in the first direction.

7. (Currently amended) The apparatus according to claim 1, wherein the ~~said~~ light projecting device includes plural light emitting elements arranged in the second direction to project a substantially parallel light flux.

8. (Currently amended) The apparatus according to claim 7, wherein the number of the ~~said~~ light emitting elements is identical with that of the photo-detectors, and the light emitting elements are arranged in array to be corresponding to respective photo-detectors one by one.

9. (Original) The apparatus according to claim 8, wherein the array of the light emitting elements is shifted in the second direction together with the photo-sensor device.

10. (Previously presented) The apparatus according to claim 3, wherein the article is placed on a transparent plate and the light projecting device and the photo-sensor device are arranged on respective sides of the transparent plate.

11. (Currently amended) The apparatus according to claim 10, wherein the ~~said~~ transparent plate is arranged stationary and the ~~said~~ light projecting device and photo-sensor device are arranged movably in the first direction.

12. (Currently amended) The apparatus according to claim 11, wherein the ~~said~~ light projecting device is provided on a lower horizontal portion of a frame and the ~~said~~ photo-sensor device is provided on an upper horizontal portion of the frame, and the ~~said~~ frame is arranged movably in the first direction.